



**Meechan, D. (2024) *Generative AI for students: the essential guide to using artificial intelligence for study at university*. London: Sage.**

***The best and the worst of times for students learning about GenAI?***

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**Keywords:** GenAI; student learning; student success.

David Meechan's *Generative AI for students* is written in response to his experimentation with generative AI (GenAI). The book aims to offer an introductory guide for non-experts and an exploration of what might be possible if students (or their supporters) are considering using GenAI to promote learning. It includes a brief overview of the history and development of GenAI before moving into a series of practical examples of how students might use the tools in support of their studies.

Although the author indicates positive feedback from a group of his own students, we do not expect that many students would work through an entire book on GenAI — more likely they would seek material in response to specific questions at the point of need. This is where Learning Developers can play an essential advisory role. More importantly, we are concerned about some of the ways the author suggests students might use GenAI tools. Some tools could be harmful to their learning, as concluded by a recent review of research studies, which suggested that 'generic AI models are not only suboptimal for human learning — they may actually have an actively detrimental effect on the development of knowledge and skills' (Hardman, 2025, n.p.). Again, there is a

crucial role for Learning Developers here in advising students on the most 'learning-friendly' strategies for incorporating GenAI. We return to this issue in more detail later.

## ***All change***

We do not underestimate the challenge of assembling authoritative guidance on a technology that has changed so quickly over the last couple of years, and which continues to change at an ever-increasing pace. When it appeared in 2022, ChatGPT already seemed a significant advance beyond what felt possible. It could produce coherent (and grammatically correct) text in multiple styles and formats from simple text prompts. Now, as well as the ability to have ongoing dialogue with AI chatbots, we have 'multimodality', where prompts can create a wide variety of formats including still images, audio, animations, and video. We can also 'translate' between different modes to use GenAI in both directions, for instance asking it to analyse or summarise an existing image or video rather than create one.

Any list of current software will soon become obsolete. Meechan acknowledges this pace of change and some of the complexity in the book's introduction. His overview table of GPT development lists key characteristics from v1 (2018) through to v3 (2020). Given the rapid advancements in this field, a more in-depth discussion on the implications of these changes would be highly beneficial. Some of the recent technical developments are likely to fundamentally change the GenAI landscape, including open-source language models (such as DeepSeek), Advanced Voice capabilities on mobile devices, and the arrival of 'Agents'. In discussing GenAI, it might have been helpful for readers to receive a more detailed analysis of the software's likely future direction, even if only in general terms. The use of accompanying web resources, as seen with other publications, could be an effective way of offering essential updates and additional links to increase the longevity of Meechan's book.

## ***Explaining the core technology***

This book, as with many introductory texts on GenAI, provides a heavily summarised explanation of the essential and distinctive structure of GenAI technology. Students do not need a detailed technical explanation of the underlying technical architecture, but

without some explanation of the datasets and ‘stack’ that are the materials used to build these tools, readers run the risk of not understanding key differences between GenAI and previous software. Without this understanding, users (especially new and non-expert ones) are unlikely to appreciate GenAI’s strengths or anticipate its limitations. If, for example, students treat GenAI as just another search engine, they will not use its full capability or appreciate some of its potential challenges (Hemsworth, Evans and Walker, 2024). Yet, in seeking to appeal to as diverse and varied a readership as ‘students’, the author has set himself the impossibly comprehensive task of seeking to review the makeup of large language models (LLMs), summarise the history of ChatGPT, touch on academic integrity, make a passing reference to equity, and support the practical use of these tools (via a glossary of key terms and jargon). This ‘busyness’ might undermine the book’s strength, as Meechan’s inviting tone is intended to reassure those who feel hesitant about using these tools to ‘give it a go’.

### ***The need for a nuanced ‘study buddy’***

The notion of the ‘study buddy AI assistant’ is introduced in Chapter Two, suggesting that GenAI can become a ‘go-to study buddy’ that can offer ‘a more personalised experience’ (p.23). The concept of using GenAI tools as study buddies is complex. Even studies that show positive impacts in this approach emphasise the nuance needed to build the appropriate context for learning to be supported. Reliance on these tools may impact students’ ability to critically reflect and analyse (Lee et al., 2025) This points to a broader tension between reasonable encouragement and uncritical use of GenAI tools.

Chapter Two suggests how Google’s Gemini can be used to generate a list of questions that a student might ask themselves to support their learning. This method encourages students to reflect on how they might answer a question as well as considering whether the GenAI tool has ‘got it right’. This Socratic approach is followed by a section where students are encouraged to have GenAI both generate a table of important thinkers in an area and create flashcards to learn key topics. These tasks position GenAI tools as the ‘expert’ and take essential learning activities (e.g. the synthesis of topics into flashcards) out of students’ hands. Such activities disconnect the student from the building of knowledge and the networks of understanding that are crucial to being able

to critically analyse and truly understand a topic. Distilling information to create summaries involves vital skills such as critical thinking, prioritising information, and synthesising knowledge. Outsourcing this activity might feel like timesaving, but in detouring around an important opportunity to think deeply about the topic, learners miss the chance to catch where they might have significant gaps or misunderstandings and bypass the potential of the moment in which it all comes together into an interconnected whole. This book is not the only place where such advice appears, but we should not be so ready to suggest that learners give away these moments where effort becomes expertise.

Part Three, 'How to approach your assessments with generative AI', contains important messages about always checking with your own tutor about what is and is not allowed in terms of institutional GenAI use. This part of the book includes a detailed breakdown of different assessment forms. Whilst not entirely comprehensive, it does include a lot of ground about the nature and purpose of different assessment formats that is likely to be helpful for students beyond their engagement with GenAI. Part Four, 'How to explore feedback with generative AI', is similarly useful in terms of the prompts it gives students about the value of engaging with feedback on their assessed work — again, this is helpful advice irrespective of a student's use of GenAI.

### ***Thinking critically and ethically***

Woven throughout Parts Three and Four, there is a short section on critical thinking and analytical skills that offers useful prompts for students to question the origin of information and the reasons they hold certain views. However, this material glosses over the link between the critical thinking that we highlighted earlier in this review, which prompts the question: might students be less inclined or able to question their thinking if they have used tech tools to take shortcuts away from this deeper critique?

At first glance, it may seem reasonable to use GenAI tools to create a series of varied views for students to 'analyse', but this misses the opportunity for students to seek out and prioritise the voices of those who have historically been marginalised and discounted. Because of the way the training datasets interact with the technological stack that produces content, anything produced inevitably pulls towards a dominant viewpoint and voice that conforms to Eurocentric norms: a voice that produces content

that is, above all, confident. This presents another conundrum for students: how can they approach different views when the familiar sounds 'right'? In this case, it is crucial that anyone using GenAI for learning engages with the voices of scholars such as Ruha Benjamin, Maha Bali, and Helen Beetham, each of whom has eloquently reflected on and critiqued the potential harms of homogenising our knowledge and our voices (Benjamin, 2019; Beetham, 2025).

In covering 'Academic integrity and the ethical use of generative AI at university', Chapter Three outlines some of the challenges associated with using GenAI, including the obvious issue of students potentially becoming tempted to submit work that is not their own. However, there is limited consideration of the ethical issues that are separate from the challenges of academic integrity. There is a lot of valuable writing on ethics available, including Maha Bali (2024) on GenAI's 'hallucinations' having a cultural bias. Cardona-Rivera et al. (2024) (amongst others) discuss 'who' gets incorporated into these tools, the implications for indigenous peoples, and the more equitable representation of the people and their knowledge. More emphasis on these ethical issues would have been helpful for readers to challenge the uncritical adoption of GenAI and enrich their interaction with the tools.

### ***A little more balance please***

This book offers an example of a transparent approach to working with GenAI tools for writing. It also encourages experimentation from groups that might feel intimidated by the technology. But does it provide an 'over-optimistic' view of GenAI's current abilities? A positive view on GenAI runs throughout the book. For instance, Meechan endorses a quote from Jane Mills, Deputy Head of Fashion at the University of Northampton, that AI 'promotes human creativity, with machine-based efficiency' (p.10). Elsewhere, he describes GenAI as an 'evolutionary step in academic support', 'a catalyst for more efficient and personalised learning' (p.23), and as a 'force for good' (p.29). Meechan also identifies 'controversy and limitations' (p.13) and suggests that issues like 'fairness and accountability' should be 'a core consideration for users of such models' as ChatGPT (p.14), but Meechan's overwhelming position is one of enthusiastic advocacy.

Whilst it is not easy to convey, introductory texts on this topic should explain why and how many commentators are deeply concerned about the development of GenAI (see,

for example, Marcus, 2024). These views are not given sufficient space in Meechan's text, but this is a criticism that could be levelled at most, if not all, introductory guides published to date. There is truth in some of these positive characterisations of GenAI, but we must give students a balanced picture that explains the potential strengths and range of possible applications of GenAI alongside discussion of its limitations and negative impact. Approaching learning as something that is best done efficiently or is ripe for productivity hacks does a disservice to students, their learning, and even to the potential of these tools.

The author is open about his own use of GenAI tools and should be applauded for the transparency of his approach. In many respects, the book is a useful prompt to reflect on the approaches and assumptions that we have uncritically positioned within our own praxis. The impact of GenAI tools on our educational practices and systems is neither inevitable nor out of our control, so it is important for our communities to keep exploring and interrogating their possible futures. Overall, although this book has several positive features, we are still looking for an introductory guide that avoids the key pitfalls of writing about GenAI tools and their potential use for students.

## **Acknowledgements**

The authors did not use generative AI technologies in the creation of this manuscript.

## **References**

Bali, M. (2024) 'The AI cultural hallucination bias', *Reflecting Allowed*, 29 September.

Available at: <https://blog.mahabali.me/educational-technology-2/the-ai-cultural-hallucination-bias> (Accessed: 15 March 2025).

Beetham, H. (2025) 'Second breakfast x imperfect offering #2', *imperfect offerings*, 8

February. Available at: <https://helenbeetham.substack.com/p/second-breakfast-x-imperfect-offering> (Accessed: 25 March 2025).

Benjamin, R. (2019) *Race after technology: abolitionist tools for the new Jim Code*.

Cambridge: Wiley.

- Cardona-Rivera, R., Alladin, J.K., Litts, B.K. and Tehee, M. (2024) 'Indigenous futures in generative artificial intelligence: the paradox of participation', in B. Buyserie and T.N. Thurston (eds.) *Teaching and generative AI: pedagogical possibilities and productive tensions*. Utah: Utah State University. Available at: <https://uen.pressbooks.pub/teachingandgenerativeai/chapter/indigenous-futures-in-generative-artificial-intelligence-the-paradox-of-participation> (Accessed: 15 March 2025).
- Hardman, P. (2025) *The impact of gen AI on human learning: a research summary*. Available at: [https://drphilippahardman.substack.com/p/the-impact-of-gen-ai-on-human-learning?utm\\_source=publication-search](https://drphilippahardman.substack.com/p/the-impact-of-gen-ai-on-human-learning?utm_source=publication-search) (Accessed: 26 February 2025).
- Hemsworth, K., Evans, J. and Walker, A. (2024) "'Understood the assignment": a UX-led investigation into student experiences of GenAI', in S. Beckingham, J. Lawrence, S. Powell and P. Hartley (eds.) *Using generative AI effectively in higher education: sustainable and ethical practices for learning, teaching and assessment*. Abingdon: Routledge, pp.54–56.
- Lee, H.-P., Sarkar, A., Tankelevitch, L., Drosos, I., Rintel, S., Banks, R. and Wilson, N. (2025) 'The impact of generative AI on critical thinking: self-reported reductions in cognitive effort and confidence effects from a survey of knowledge workers', *CHI conference on human factors in computing systems (CHI '25)*. Yokohama, Japan 26–1 May. New York: ACM. Available at: <https://www.microsoft.com/en-us/research/publication/the-impact-of-generative-ai-on-critical-thinking-self-reported-reductions-in-cognitive-effort-and-confidence-effects-from-a-survey-of-knowledge-workers> (Accessed: 17 March 2025).
- Marcus, G.F. (2024) *Taming Silicon Valley: how we can ensure that AI works for us*. Cambridge, MA: MIT Press.

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